



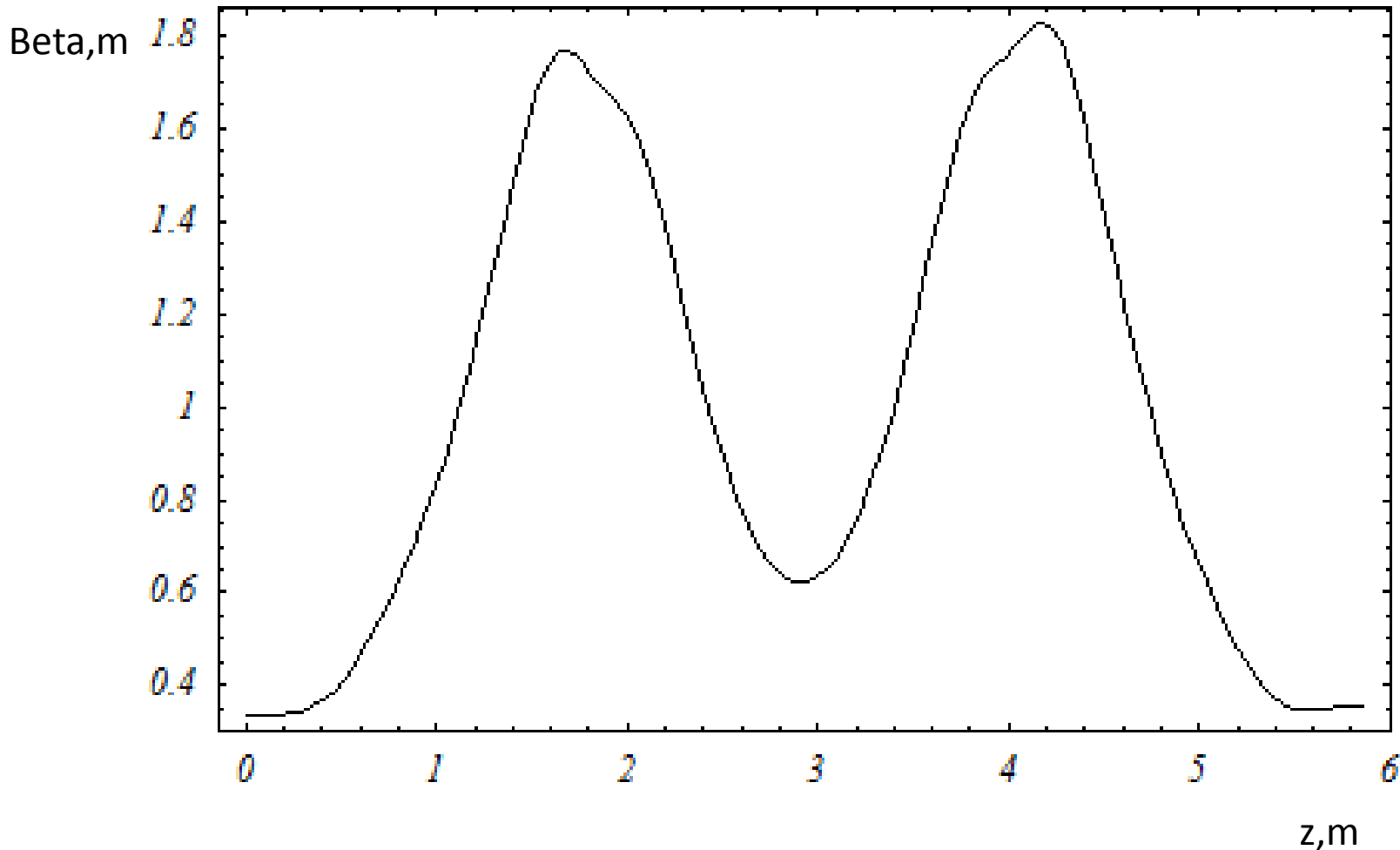
MICE Step π Ideas

J. Pasternak, IC London

Assumed geometrical constraints

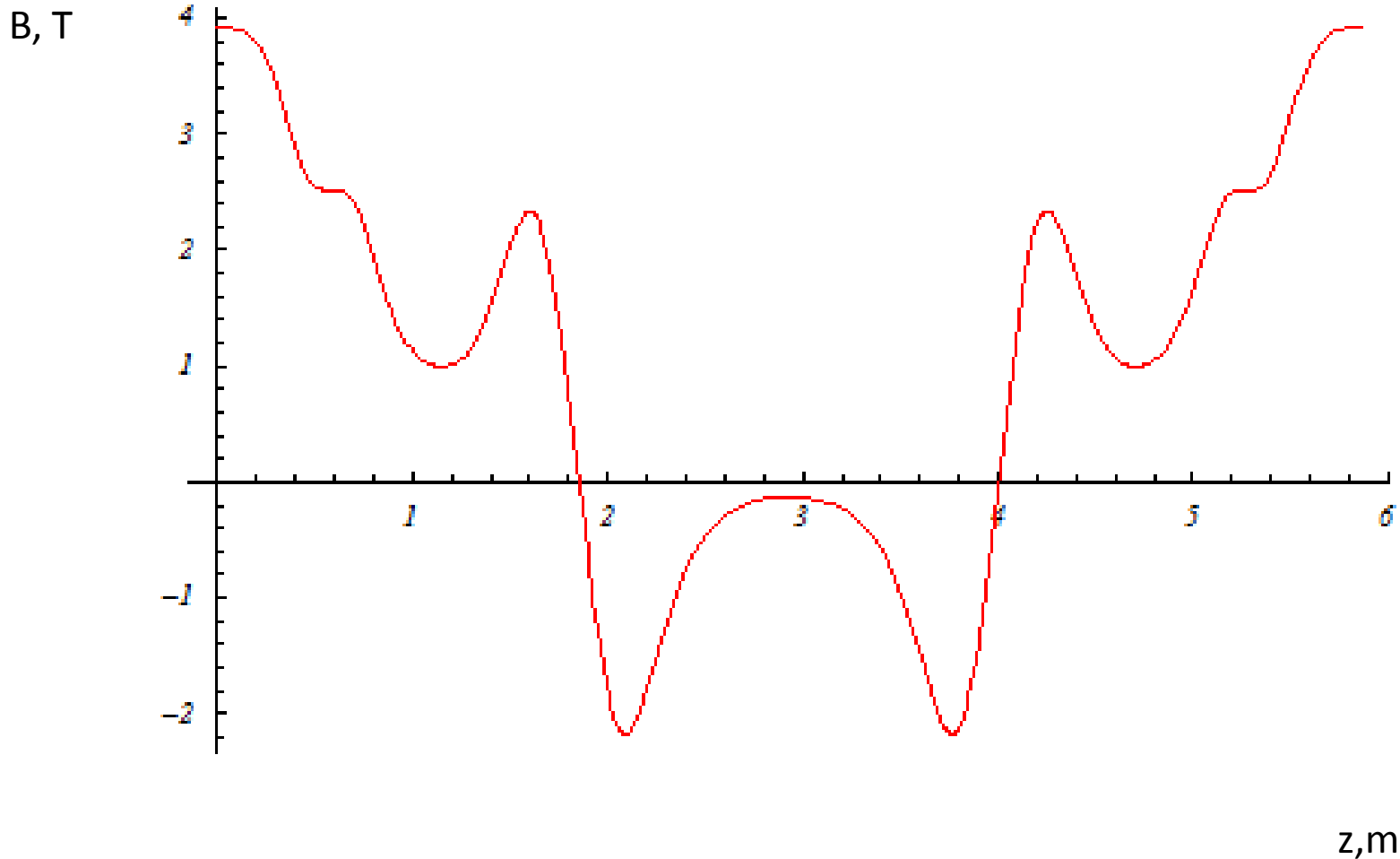
- Length between the centres of the FC
 - Single cavity: 1556 mm
 - Double cavity: 1956 mm
 - Double cavity + absorber in the middle: 2356 mm

Lattice with 2 cavities + absorber in the middle, beta function



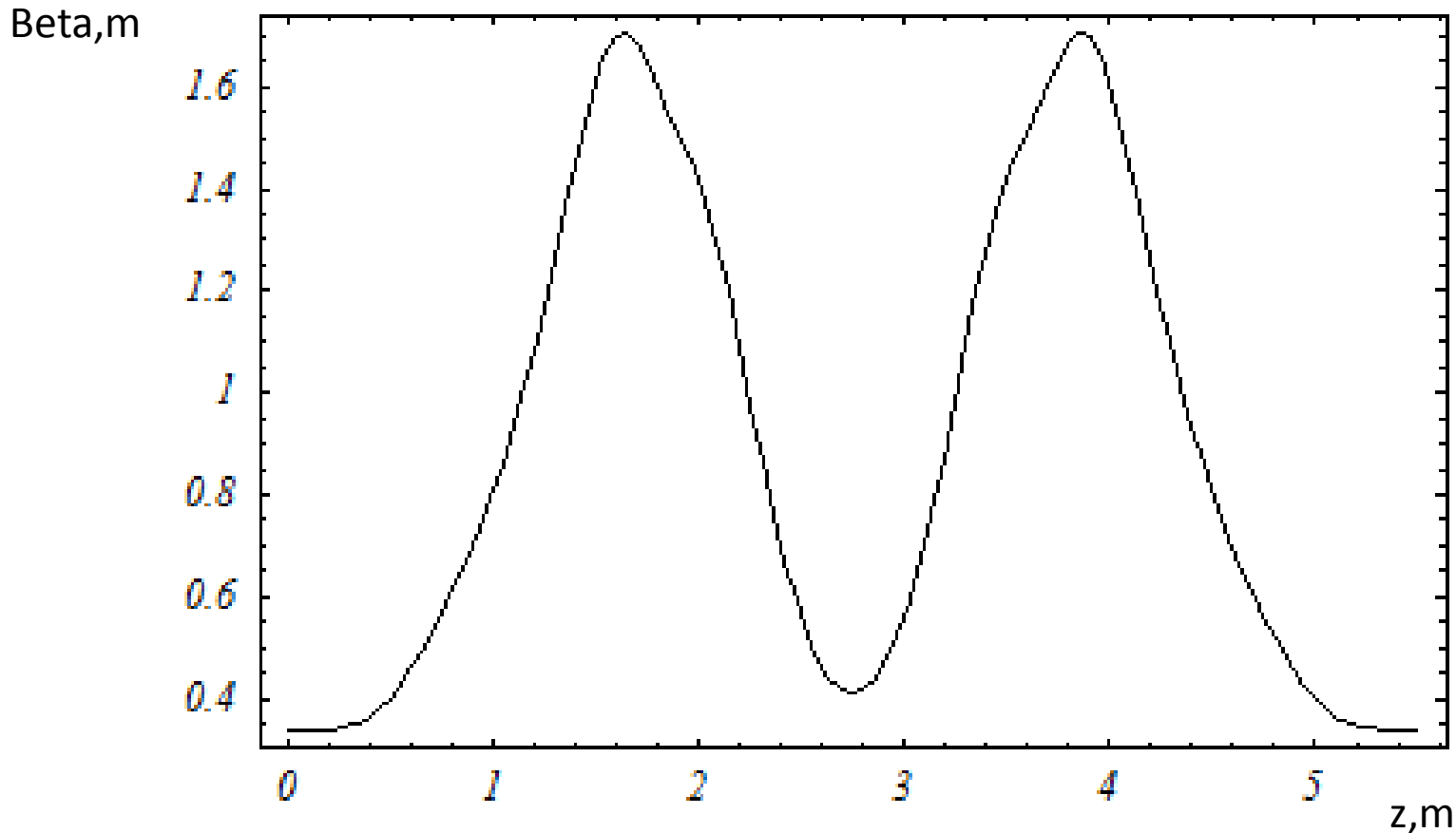
- No additional space between SS and FC
- Beta absorber not very satisfactory, beta in the FC too large – most likely aperture issues.

Lattice with 2 cavities + absorber in the middle, B field



- +--+ studied till now.

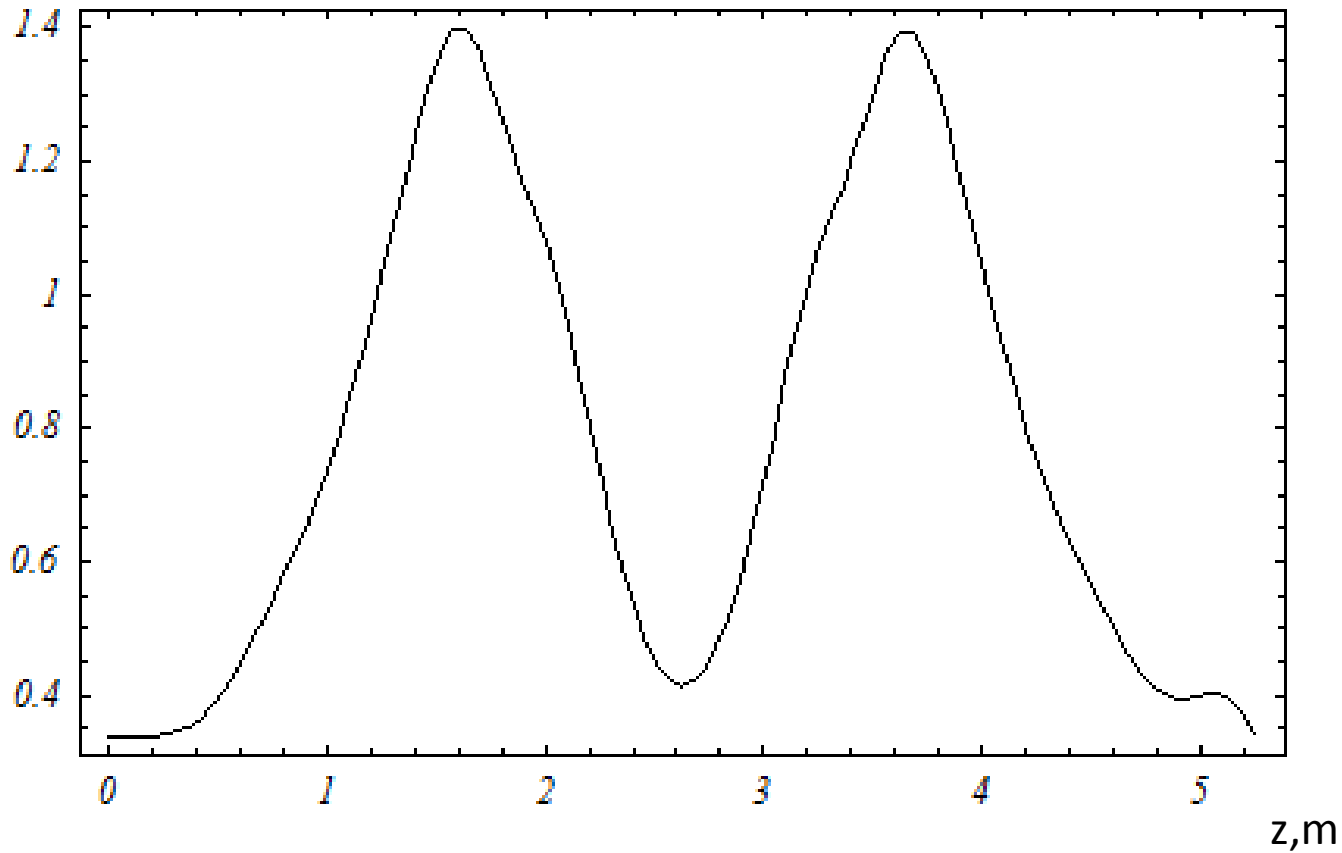
Lattice with only 1 cavity



- LiH absorber may be placed on both sides of the cavity (as close as possible) .
- Only +--+ geometry studied till now.

Lattice with only 1 cavity

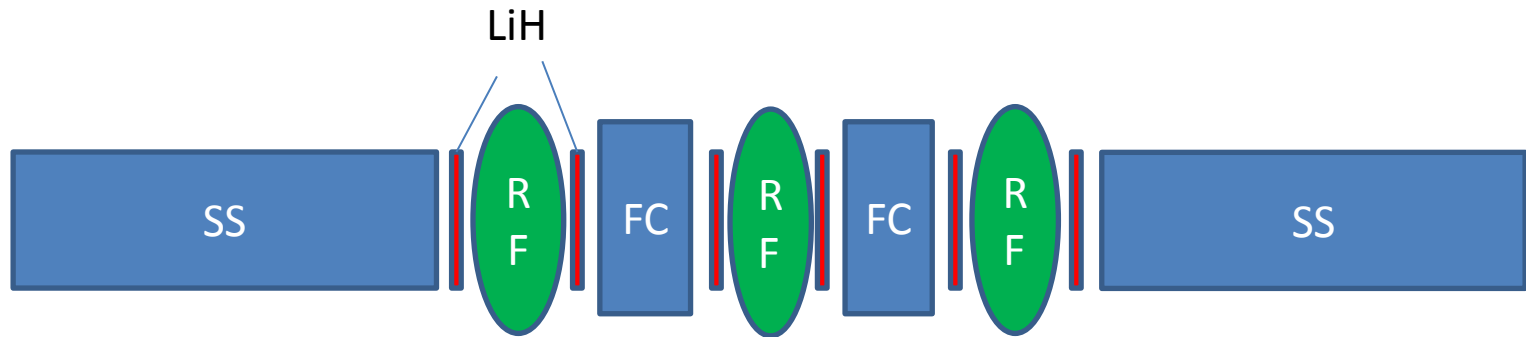
Beta,m



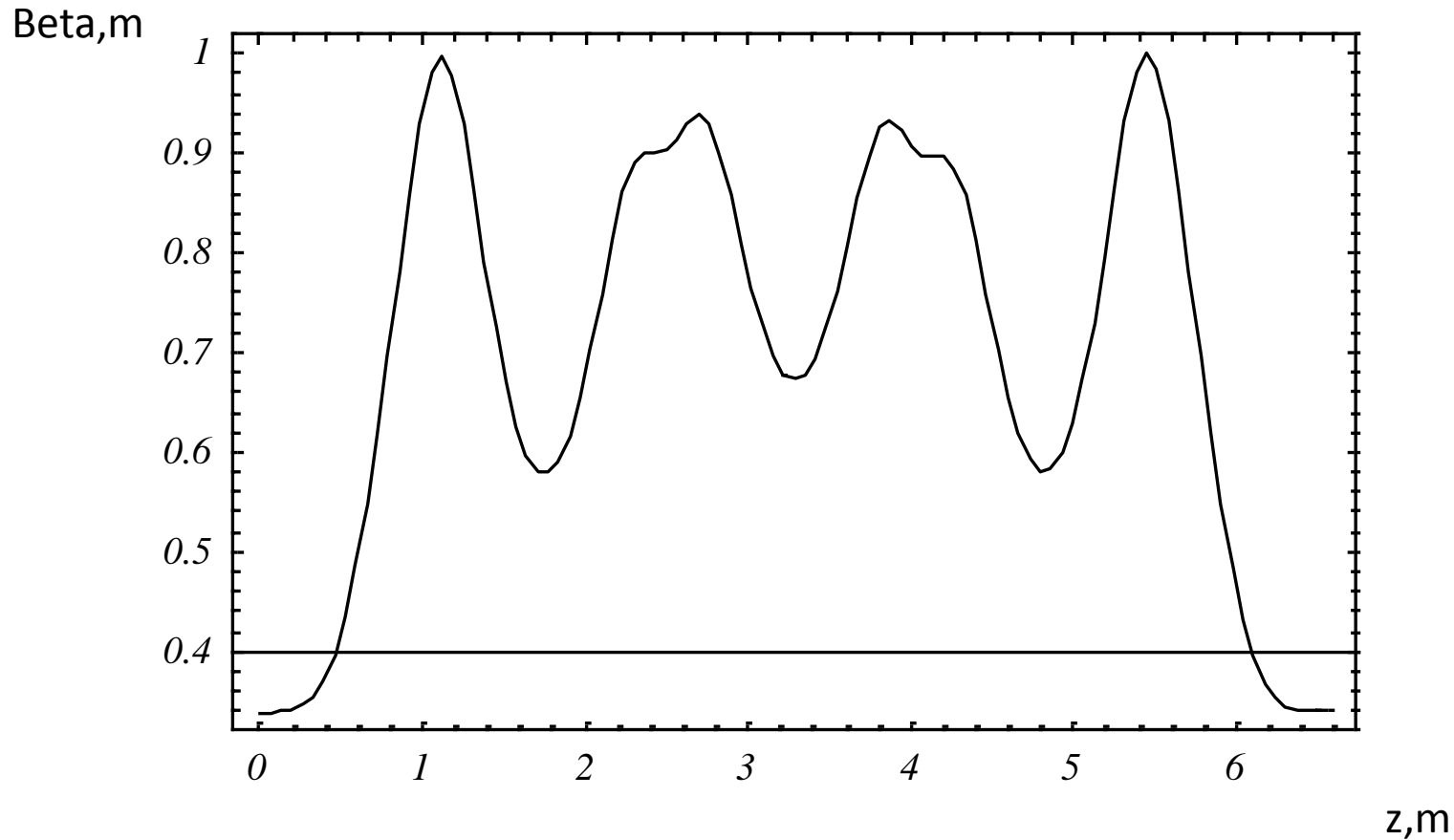
This solution has larger beta in the absorber, but smaller in the FC.

Alternative geometry concept

- Allows to use 3 single RF cavities
- Assumes LiH absorbers put on both sides of each RF cavity as close as possible. Concept similar to the IDS-NF cooling channel.
- Should allow screening of Trackers from the dark current induced radiation (?) –TBC!
- B field can change sign in each RF cavity – no coupling between the opposite walls. May result in lower breakdown risk (?). However not studied yet.

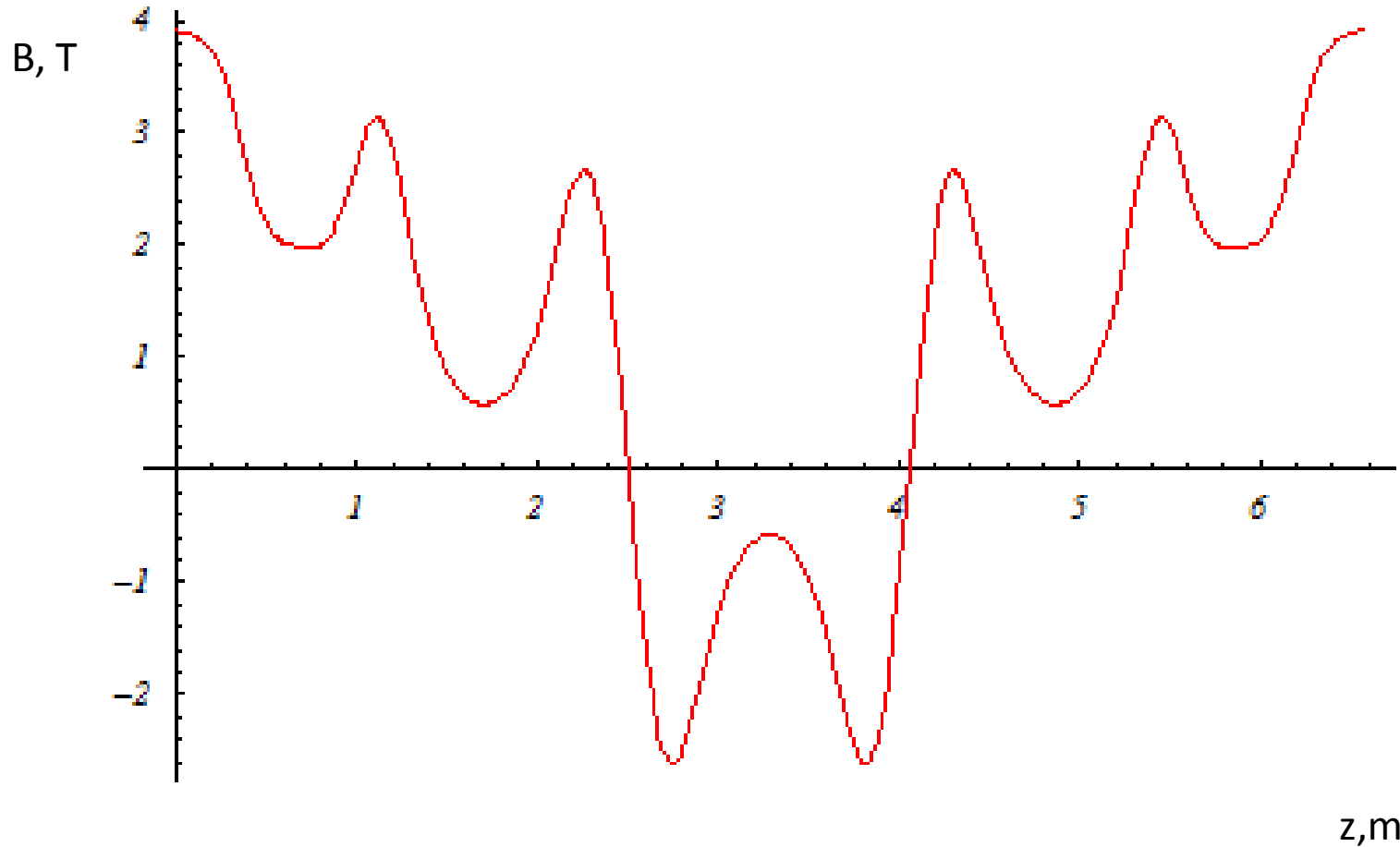


Alternative geometry, optics



- No aperture issues!
- It can still be improved.

Alternative geometry, B field



- No aperture issues!
- It can still be improved.